

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Claims 1-46 (Cancelled)

47. (New) A method of processing electronic document files having predefined structures to generate consistency link data identifying within said electronic document files the locations of items of data which do or do not fulfill the requirements of one or more consistency relationships, the method comprising:

providing data defining one or more consistency rules, each of said consistency rules identifying source criteria for locating data within electronic document files having predefined structures and relationship which may be fulfilled by items of data;

utilizing said source criteria of said defined consistency rules to identify items of data located at locations within electronic document files being processed which fulfill said source criteria of said consistency rules;

determining whether said identified items of data from within said electronic document files fulfill the relationship defined by the consistency rule utilized to identify said items of data; and

generating consistency link data identifying locations of identified items of data within said electronic documents based upon said determination of whether said identified items of data at said locations fulfill the relationships defined by the consistency rules utilized to identify said items of data.

48. (New) A method according to claim 47, wherein said data defining one or more consistency rules includes, for each of said consistency rules, data defining one or more pointers, said one or more pointers being pointers to part of a predefined structure for an electronic document file, wherein said identification of items of data utilizing source criteria comprises identifying, within electronic document files being processed having said predefined structure, items of data located at locations within said electronic document files identified by said one or more pointers.

49. (New) A method in accordance with claim 47, wherein said data defining one or more consistency rules includes, for each of said consistency rules, data defining a condition, wherein said determination of whether identified items of data fulfill a relationship defined by a consistency rule comprises determining whether identified data does or does not fulfill the condition defined by said consistency rule.

50. (New) A method in accordance with claim 49, wherein said data defining a condition comprises data defining a comparison operation, wherein said determination of whether identified items of data fulfill a relationship defined by a consistency rule comprises determining whether identified items of data fulfill said comparison operation defined by said consistency rule.

51. (New) A method in accordance with claim 47, wherein each of said consistency rules is associated with a first or second data generation category, wherein

said generation of consistency link data comprises generating consistency link data identifying the locations of identified items of data within electronic document files for which no data exists which fulfills the relationships defined by a consistency rule utilized to identify said items of data only if said consistency rule comprises a consistency rule associated with said first data generation category.

52. (New) A method in accordance with claim 47, wherein said generation of consistency link data further comprises the generation of data identifying the consistency rule which causes the generation of said consistency link data and status data indicative of whether or not the items of data at the locations identified by said consistency link data fulfills the relationships defined by the consistency rule utilized to generate said consistency link data.

53. (New) A method in accordance with claim 47, further comprising:
monitoring said electronic document files to determine whether any of said electronic document files have been amended; and
initiating the processing of said electronic document files to generate further consistency link data on the basis of said determination.

54. (New) A method in accordance with claim 53 wherein said monitoring step comprises determining whether a time stamp of an electronic document file of said processed electronic document files has been amended and if the time stamp of a

document has been amended, determining which, if any, portions of data within said amended electronic document files have been updated.

55. (New) A method in accordance with claim 53, wherein the generation of further consistency link data comprises:

determining which consistency link data of previously generated consistency link data was generated utilizing a consistency rule having source criteria which identifies locations in said amended portions of said electronic document files;

deleting any of said previously generated consistency link data which was generated utilizing a consistency rule having source criteria which identifies locations in said amended portions of said electronic document files; and

generating further consistency link data utilizing said consistency rules including source criteria which identify locations in said amended portions of said electronic documents.

56. (New) A method of generating an output presentation identifying data within electronic document files which does or does not fulfill the requirements of a formal set of consistency relationships defined by a set of consistency rules comprising:

providing data defining one or more consistency rules, each of said consistency rules identifying source criteria for locating data within electronic document files having predefined structures and relationship which may be fulfilled by items of data;

utilizing said source criteria of said defined consistency rules to identify items of data located at locations within electronic document files being processed which fulfill said source criteria of said consistency rules;

determining whether said identified items of data from within said electronic document files fulfill the relationship defined by the consistency rule utilized to identify said items of data; and

generating consistency link data identifying locations of identified items of data within said electronic documents based upon said determination of whether said identified items of data at said locations fulfill the relationships defined by the consistency rules utilized to identify said items of data;

processing said consistency link data to generate an output presentation; and
outputting said output presentation.

57. (New) A method according to claim 56, wherein said processing said consistency link data comprises processing said consistency link data and said electronic document files to generate an output presentation comprising a set of linked documents, said set of linked documents comprising a set of one or more electronic documents containing data being representations of said electronic document files, wherein the data of said linked set of documents is linked on the basis of said consistency link data thereby identifying data utilizing said electronic document files which does or does not fulfill a set of formal consistency relationships defined by a set of consistency rules.

58. (New) A method in accordance with claim 57, wherein said output presentation further comprises labels labeling data identified by said consistency link data, as fulfilling or not fulfilling the requirements of a consistency relationship defined by a consistency rule.

59. (New) A method in accordance with claim 58, further comprising providing data associating a natural language description of the relationship which should be fulfilled by data in accordance with the consistency relationship defined by each said consistency rule, wherein said labels in said output presentation comprise the natural language description associated with the consistency rule used to generate said consistency link data.

60. (New) Apparatus for processing electronic document files having predefined structures to generate consistency link data identifying within said electronic document files the locations of items of data which do or do not fulfill the requirements of one or more consistency relationships, the apparatus comprising:

a receiver operable to receive data defining electronic document files having predefined structures;

a rules store operable to store data defining one or more consistency rules, each of said consistency rules identifying source criteria for locating data within electronic document files having predefined structures and a relationship which may be fulfilled by items of data;

an identification module operable to utilize source criteria of consistency rules stored in said rules store to identify items of data located at locations within electronic document files received by said receiver which fulfill said source criteria of said consistency rules;

a processor operable to determine whether items of data identified by said identification module fulfill the relationship defined by the stored consistency rule utilized to identify said items of data; and

a data generation unit operable to generate consistency link data identifying locations of items of data, identified by said identification module based upon the determination by said processor of whether said identified items of data fulfill the relationships defined by the consistency rules utilized by said identification module to identify said items of data.

61. (New) An apparatus in accordance with claim 60, further comprising a selection module operable to enable a user to select one or more electronic document files from a set of electronic document files received by said receiver, wherein said identification module is operable to utilize source criteria of consistency rules stored in said rules store to identify items of data located at locations within selected electronic document files of said input electronic documents selected utilizing said selection module.

62. (New) An apparatus according to claim 60, wherein said rules store is configured to store data defining one or more consistency rules including, for each of

said consistency rules, data defining one or more pointers, said one or more pointers being pointers to part of a predefined structure for an electronic document file, wherein said identification module is operable to identify items of data within input electronic document files being processed having said predefined structure located at locations within said electronic document files identified by said one or more pointers of said stored consistency rules in said rules store.

63. (New) An apparatus in accordance with claim 60, wherein said rules store is configured to store data defining one or more consistency rules including, for each of said consistency rules, data defining a condition, wherein said processor is operable to determine whether items of data identified by said identification module fulfill a relationship defined by a stored consistency rule by determining whether data identified by said identification module does or does not fulfill the condition defined by a stored consistency rule stored in said rules store.

64. (New) An apparatus in accordance with claim 63, wherein said data defining a condition comprises data defining a comparison operation, wherein said processor is operable to determine whether items of data identified by said identification module fulfill a relationship defined by a stored consistency rule by determining whether identified items of data fulfill the comparison operation defined by a stored consistency rule stored in said rules store.

65. (New) An apparatus in accordance with claim 60, wherein said rules store is configured to store data associating each of said consistency rules with a first or second data generation category, wherein said data generation unit is operable to generate consistency link data identifying the locations of identified items of data within electronic document files being processed for which no data exists which fulfills the relationships defined by a consistency rule stored in said rules store utilized by said identification module to identify said items of data only if said consistency rule comprises a consistency rule associated with said first data generation category.

66. (New) An apparatus in accordance with claim 60, wherein said data generation unit is operable to generate consistency link data including data identifying the consistency rule which causes an item of consistency link data to be generated and to associate each item of consistency link data with status data indicative of whether or not the items of data at the locations identified by said consistency link data fulfills the relationship defined by the consistency rule utilized to generate said consistency link data.

67. (New) An apparatus in accordance with claim 60 further comprising:
a monitoring module operable to monitor said electronic document files received by said receiver to determine whether any of said electronic document files have been amended; and

an initiation module for initiating the processing of said input electronic document files to generate further consistency link data on the basis of the determination by said monitoring module of whether said electronic document files have been amended.

68. (New) An apparatus in accordance with claim 67 wherein said monitoring module is arranged to determine whether a time stamp of an electronic document file of said processed electronic document files has been amended and if the time stamp of a document has been amended, to determine which, if any, portions of data within said amended electronic document files have been updated.

69. (New) An apparatus in accordance with claim 67, further comprising:
a link identification unit operable to determine items of previously generated consistency link data which were generated utilizing a consistency rule having source criteria which identifies locations corresponding to portions of electronic document files identified as having been amended by said monitoring module;

a deletion module operable to delete any items of said previously generated consistency link data which identified by said link identification unit; and

a regeneration unit operable to cause further consistency link data to be generated utilizing consistency rules including source criteria which said monitoring module determines identifies locations corresponding to portions of amended electronic document files.

70. (New) An apparatus for generating an output presentation identifying data within electronic document files which does or does not fulfill the requirements of a set of consistency relationships defined by a set of consistency rules comprising:

a receiver operable to receive data defining electronic document files having predefined structures;

a rules store operable to store data defining one or more consistency rules, each of said consistency rules identifying source criteria for locating data within electronic document files having predefined structures and a relationship which may be fulfilled by items of data;

an identification module operable to utilize source criteria of consistency rules stored in said rules store to identify items of data located at locations within electronic document files received by said receiver which fulfill said source criteria of said consistency rules;

a processor operable to determine whether items of data identified by said identification module fulfill the relationship defined by the stored consistency rule utilized to identify said items of data;

a data generation unit operable to generate consistency link data identifying locations of items of data, identified by said identification module based upon the determination by said processor of whether said identified items of data fulfill the relationships defined by the consistency rules utilized by said identification module to identify said items of data; and

an output generation unit operable to process consistency link data generated by said data generation unit to generate an output presentation.

71. (New) An apparatus in accordance with claim 70, wherein said output generation unit is arranged to process consistency link data and electronic document files to generate an output presentation comprising a set of linked documents, said set of linked documents comprising a set of one or more electronic documents containing data being representations of said electronic document files, wherein the data of said linked set of documents is linked on the basis of said consistency link data thereby identifying data within said electronic document files which does or does not fulfill a set of formal consistency relationships defined by said set of consistency rules.

72. (New) An apparatus in accordance with claim 70, wherein said rules store is configured to store a set of consistency rules, each of said consistency rules having associated therewith label data, said output generation unit being arranged to generate an output presentation further comprising labels labeling data identified by said consistency link data as fulfilling or not fulfilling the requirements of a consistency relationship defined by a set of consistency rules.

73. (New) An apparatus in accordance with claim 72, wherein said rules store is arranged to store a set of one or more consistency rules each having associated therewith a natural language description of a relationship which should be fulfilled by data in accordance with the consistency relationship defined by said consistency rule,

wherein output generation unit is arranged to generate an output presentation wherein said natural language descriptions are used to label data which does or does not fulfill a requirement of a set of consistency rules.

74. (New) A computer system for monitoring the consistency of electronic documents with the requirements of one or more formal consistency rules, comprising:

- a receiver operable to receive data defining electronic document files having predefined structures;

- a rules store operable to store data defining one or more consistency rules, each of said consistency rules identifying source criteria for locating data within electronic document files having predefined structures and a relationship which may be fulfilled by items of data;

- an identification module operable to utilize source criteria of consistency rules stored in said rules store to identify items of data located at locations within electronic document files received by said receiver which fulfill said source criteria of said consistency rules;

- a processor operable to determine whether items of data identified by said identification module fulfill the relationship defined by the stored consistency rule utilized to identify said items of data;

- a data generation unit operable to generate consistency link data identifying locations of items of data, identified by said identification module based upon the determination by said processor of whether said identified items of data fulfill the

relationships defined by the consistency rules utilized by said identification module to identify said items of data; and

a rules generation module operable to generate rules data defining consistency rules, each of said consistency rules identifying source criteria for locating data within electronic document files having a predefined structure and a relationship which may be filled by items of data.

75. (New) A computer system in accordance with claim 74 wherein said rules generation module comprises:

a selection module for selecting one or more portions of a data structure defining the structure of an electronic document file; and

a rule receiver operable to receive data defining a condition against which data from within electronic documents in accordance with said predefined structure found at said portions is to be tested to determine whether data does or does not fulfill a required relationship.

76. (New) An apparatus in accordance with claim 75, wherein said rule receiver is further operable to receive data defining a data generation category to be associated with a consistency rule, wherein said data generation categories determine whether or not consistency link data is generated for said rule when no data exists which fulfils the condition of said consistency rule.

77. (New) An apparatus in accordance with claim 75, wherein said rule receiver is further operable to receive data defining a natural language description of a consistency relationship defined by a said consistency rule, wherein said natural language description is arranged to be used for the generation of labels in an output presentation.

78. (New) A computer program product storing computer implementable instructions operable when interpreted by a programmable computer to cause the programmable computer to become configured as:

- a receiver operable to receive data defining electronic document files having predefined structures;

- a rules store operable to store data defining one or more consistency rules, each of said consistency rules identifying source criteria for locating data within electronic document files having predefined structures and a relationship which may be fulfilled by items of data;

- an identification module operable to utilize source criteria of consistency rules stored in said rules store to identify items of data located at locations within electronic document files received by said receiver which fulfill said source criteria of said consistency rules;

- a processor operable to determine whether items of data identified by said identification module fulfill the relationship defined by the stored consistency rule utilized to identify said items of data; and

a data generation unit operable to generate consistency link data identifying locations of items of data, identified by said identification module based upon the determination by said processor of whether said identified items of data fulfill the relationships defined by the consistency rules utilized by said identification module to identify said items of data.

79. (New) A data carrier in accordance with claim 78 comprising a computer disc.

80. (New) A computer disc in accordance with claim 79, wherein said computer disc comprises an optical, magneto-optical, or magnetic disc.

81. (New) The computer program product of claim 78, wherein the programmable computer is operable to transmit and receive data carried by an electrical signal via the Internet.